

SECTION 1

TABULATION OF ACCEPTANCE SAMPLING AND TESTING

In Section 1, where the Testing Frequency specifies **Initial**, the term will mean
a test conducted once prior to paving for the life of a project.

In the footnote of Section 1, the term **approved** will mean as certified by the Regional Materials Engineer
based on historical test data of the material and/or the Contractor's test data.

Section 1 Table of Contents

01558	Temporary Traffic Striping	1
01561	Temporary Environmental Fence	1
01891	Move Street Sign and Mailbox Assemblies	2
01892	Reconstruct Clean out, Meter, Valve, Manhole, and Monument Boxes	2
02056	Common Fill	3
02061	Select Aggregates	3
02075	Geotextiles	3
02078	Asphalt Overlay Fabric	4
02082	Water Meter	4
02324	Compaction	5
02330	Embankment	6
02332	Embankment For Bridge	7
02372	Wire Enclosed Riprap	8
02373	Riprap	8
02376	Erosion Control Blankets/Channel Liners	8
02455	Driving Piles	9
02466	Drilled Caisson	9
02610	Pipe Culverts	10
02611	Diversion Box Gate and Frame	12
02613	Culvert End Section	13
02622	Underdrain	13
02643	Concrete-Lined Ditch	13
02645	Precast Concrete Box Culvert	14
02712	Lean Concrete Base Course	15
02715	Hydrated Lime Treated Roadbed	18
02721	Untreated Base Course	19
02741	Hot Mix Asphalt	21
02743	Hot Mix Asphalt - Bike and Pedestrian Paths	26
02744	Hot Mix Asphalt - Procurement	29
02745	Asphalt Materials	32
02746	Hydrated Lime	34
02748	Prime Coat/Tack Coat	36
02749	Asphalt Driveway	37
02752	Portland Cement Concrete Pavement	37
02762	Plowable Pavement Marker	41
02765	Pavement Marking Paint	41
02768	Pavement Marking Material	42
02771	Curb, Gutter, Driveway and Disabled Pedestrian Ramp	42
02773	Asphalt Concrete Curb	43
02776	Concrete Sidewalk, Median Filler, and Flatwork	43
02785	Chip Seal Coat	44
02786	Open Graded Surface Coarse	46
02812	Pressurized Irrigation Systems	51
02821	Chain Link Fencing and Gates	53

02822	Right-of-Way Fence and Gate	53
02825	Cattle Guard	54
02841	Traffic Barriers	55
02842	Delineators	57
02861	Precast Noise/ Retaining Walls	58
02891	Traffic Signs	60
02892	Traffic Signal	60
02896	Boundary Survey	61
02911	Mulch	62
02912	Topsoil	62
02922	Seed, Turf Seed, and Turf Sod	63
02932	Trees, Shrubs, and Groundcovers	64
02966	Recycled Surface	64
02967	Surface Repaving	65
03055	Portland Cement Concrete	65
03152	Concrete Joint Control	69
03211	Reinforcing Steel and Welded Wire	70
03310	Structural Concrete	71
03392	Penetrating Concrete Sealers	71
03412	Prestressed Concrete	71
03575	Flowable Fill	73
05120	Structural Steel	74
05822	Expansion Bearing	74
05832	Expansion Joint	75
06055	Timber and Timber Treatment	76
09970	Painting for Structural Steel	76
16135	Electrical Junction Boxes	77
16525	Highway Lighting	78
16526	Electric Work (Bridges)	78
	Galvanized Steel Pipe, Polyvinyl Pipe, and Copper Pipe	79
	Cast Iron Pipe Fittings and Welded Steel Pipe	79
	Fittings, Valves, Gaskets, Bicycle Grates, Manholes, etc.	79
	Electrical Components	79
	Plumbing Components	80

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
01558	Temporary Traffic Striping				
	Pavement Marking Tape	Test Report	Submit a 2 foot long sample of each color to Central Materials Chemistry Lab prior to application. A test report will be issued for all pretested material.	Central Materials Lab	Rejection
	Temporary Pavement Markers	Test Report	Submit a sample of each color to Central Materials Chemistry Lab prior to application. A test report will be issued for all pretested material.	Central Materials Lab	Rejection
Related Items: 02765	Paint and Glass Beads				
01561	Temporary Environmental Fence				
	Fence Metal Post	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 1

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
01891	Move Street Sign and Mailbox Assemblies				
Related Items: 03055 06055	Concrete Wood posts, shelf and brace				
01892	Reconstruct Clean out, Meter, Valve, Manhole, and Monument Boxes				
	Extension Rings	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
Related Items: 03055	Concrete				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 2

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02324	Compaction	Laboratory Density (AASHTO T-99 Method D) (AASHTO T-180 Method D for A-1 soils)	For embankments up to 100,000 yd ³ - one test per 20,000 yd ³ for each layer, then one test per 50,000 yd ³ for each layer.		
	Embankment	Field Density and Moisture Content by Nuclear Gage AASHTO T-310	A lot equals one production day. One test per subplot. A subplot is approximately equal to 3,000 tons or 2,000 yd ³ and 6,000 yd ³ in cut sections.	Grade	Contractor must continue to compact until density meets specification.
	Backfill	Field Density and Moisture Content by Nuclear Gage AASHTO T-310	Four tests per lot. Test lot < 200 yd ³ and cannot be more than one pipe culvert or small structure.	Project Site	Contractor must continue to compact until density meets specification.
	Embankment for Bridge	Field Density and Moisture Content by Nuclear Gage AASHTO T-310 Test Report	Six tests per end per each 1 foot layer. Two of the six must be within 2 feet of the outside perimeter per layer. Submit form T-348 weekly	Grade	Contractor must continue to compact until density meets specification.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 5

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02330	Embankment	Soil Classification AASHTO M-145	One test per 20,000 yd ³ in each soil type. (A minimum of one test per source or soils type.)	Grade	Rejection
	Embankment material may be too rocky to test for density when retention on the No. 10 sieve is > 65% or when retention on the No. 4 sieve is >60%	Run gradation to confirm too rocky to test. Document compaction effort.	Continued visual observation	Grade	Develop and perform acceptable compaction procedures.
		Test Report	Submit form T-348 weekly		
Related Items: 02056 02324	Common Fill Compaction				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 6

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02332	Embankment For Bridge	Soil Classification AASHTO M-145	One test per 20,000 yd ³ in each soil type. (A minimum of one test per source or soils type.)	Grade	Rejection
	Embankment material may be too rocky to test for density when retention on the No. 10 sieve is > 65% or when retention on the No. 4 sieve is >60%	Run gradation to confirm too rocky to test. Document compaction effort.	Continued visual observation	Grade	Develop and perform acceptable compaction procedures.
		Test Report	Submit form T-348 weekly		
Related Items: 02056 02324	Common Fill Compaction				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 7

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02372	Wire Enclosed Riprap	Wear Check Sample* AASHTO T96	Submit 100 lb sample from each source. Use form T-268.	Materials Source	Rejection
		Soundness* AASHTO T-104	Submit 100 lb sample from each source. Use form T-268.	Materials Source	Rejection
Related Items: 02056 02316 02324 03211	Common Fill Roadway Excavation Compaction Reinforcing Steel and Welded Wire.				
02373	Riprap	Wear Check Sample* AASHTO T96	Submit 100 lb sample from each source. Use form T-268.	Materials Source	Rejection
		Soundness* AASHTO T-104	Submit 100 lb sample from each source. Use form T-268.	Materials Source	Rejection
02376	Erosion Control Blankets/Channel Liners	Manufacturer's Certificate of Compliance	One per lot	Project Site	Rejection
Related Items: 02922	Seed				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 8

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02455 Related Items 03055 03211	Driving Piles Concrete Reinforcing Steel	Certified mill test report and test report.	Issued by Central Lab based on tests performed prior to shipment. A test report will accompany the shipment. All pretested material will be tagged with an orange UDOT sticker.	Manufacturer's Plant or Central Lab	Rejection
02466 Related Items 03055 03211	Drilled Caisson Concrete Reinforcing Steel				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 9

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02610	Pipe Culverts Asphalt Coating	Test Report	Issued by Central Lab (Asphalt/Chemistry Lab) based on tests performed prior to shipment. A test report will be supplied prior to shipment.	Central Lab (Asphalt/Chemistry Lab)	Rejection
	Corrugated Pipe Culverts and Pipe Arch Culverts	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
		Visual Inspection	Each Shipment	Project Site	Rejection
	Smooth-lined Pipe Culverts and Pipe Arch Culverts Excluding Concrete Pipe	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
		Visual Inspection	Each Shipment	Project Site	Rejection
	Aluminized Pipe	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
		Visual Inspection	Each Shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 10

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02610	Pipe Culverts (continued)				
	Pipe - Concrete	Manufacturer's Certificate of Compliance. Attach Quality Control (QC) test report for each production run or lot of pipe represented. The QC test report must include: Load bearing (D-load), compressive strength, permeability and visual inspection pass/fail test results for each production run or lot represented.	Each Shipment	Project Site	Rejection
	Concrete	Visual Inspection Per Section 03055 except as follows: Mix design (trial batches) must be submitted and approved by the Region Lab each new calendar year.	Each Shipment	Project Site Manufacturer's Plant or Central Lab	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer

May 2003

Page 11

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02610	Pipe Culverts (continued)				
	Pipe - Metal	Test Report	Issued by Central Lab based on tests performed prior to shipment. A test report will accompany the shipment. All pretested material will be tagged with an orange UDOT sticker.	Manufacturer's Plant or Central Lab	Rejection
		Visual Inspection	Each Shipment	Project Site	Rejection
02611	Diversion Box Gate and Frame	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer

May 2003

Page 12

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02613	Culvert End Section	Test Report	Issued by Central Lab based on tests performed prior to shipment. A test report will accompany the shipment. All pretested material will be tagged with a orange UDOT sticker.	Manufacturer's Plant or Central Lab	Rejection
		Visual Inspection	Each Shipment	Project Site	Rejection
02622 Related Items: 02610 02061 02075	Underdrain Pipe Culverts Select Aggregate Geotextile				
02643 Related Items: 02324 03055 03152	Concrete-Lined Ditch Compaction Portland Cement Concrete Concrete Joint Control				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 13

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02645	Precast Concrete Box Culvert	Fabricators must be pre-qualified by the Materials Division through the Quality Management Plan: Precast/Prestressed Concrete Structures. Select from Materials Division list of pre-qualified sources.		Prequalified Source	Rejection of product and possible removal from pre-qualified source list.
		Test Report	Issued by Central Lab based on tests performed prior to shipment. A test report will accompany the shipment. All pretested material will be tagged with an orange UDOT sticker.	Fabricators Plant	Rejection
	Concrete	Per Section 03055 except as follows. Mix Design(Trial Batches) must be submitted and approved, by the Materials Division, each new calendar year.			
		Visual Inspection	Each Shipment	Project Site	Rejection
Related Items: 03211 03211	Reinforcing Steel (Epoxy Coated) Welded Steel Wire Reinforcement				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 14

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02712	Lean Concrete Base Course	Wear * AASHTO T-96	Submit a 200 lb sample of aggregate per source, use form T-268.	Materials Source	Contractor must select another materials source.
		Unit Weight * AASHTO T-19	Submit a 200 lb sample of aggregate per source, use form T-268.	Materials Source	Contractor must select another materials source.
		Liquid Limit & Plasticity Index * AASHTO T-89 and T-90	Submit a 50 lb sample of aggregate per source, use form T-268.	Materials Source	Contractor must select another materials source.
		Liquid Limit and Plasticity Index AASHTO T-89 and T-90	A minimum of one determination per week.	Stockpile	Reject material
		Water Quality AASHTO T-26	Submit a 1 qt sample for each non-potable source.	Source	Use an acceptable source.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 15

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02712	Lean Concrete Base Course (continued)	Mix Design (Trial Batches) Contractor's trial batches to be made in accordance with standard specifications. Trial batch results shall be submitted and approved before any lean concrete is placed. Sufficient batches shall be made to cover any possible changes in mix components that might occur.	Submit a 1 pt sample of admixtures used in trial batches to Central Lab for fingerprinting. When production starts, send samples of admixtures to Central Lab to insure they are the same as used in trial batches.	Suppliers Location	Contractor may have to change his proportions of coarse and fine aggregate, wash or crush the coarse aggregate finer, or add more cement.
		Sieve Analysis AASHTO T-27 and T-11	One gradation per stockpile for each day of operation.	Stockpile	Reject material
		Slump Test AASHTO T-119 Air Test AASHTO T-152	Test the first three truck loads at start up and the first three truck loads after each shutdown of more than one hour. Take additional tests at random throughout the shift (approximately one test for every 800 yd ³ of concrete). Test the first three truck loads after each failed test.	Plant Site	Another test is taken immediately. If the second test fails, the load is rejected. If the second test is in specification, a third test is taken. The load is then accepted or rejected based on the result of the third test.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 16

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02712	Lean Concrete Base Course (continued)	Yield AASHTO T-121	A minimum of one test per day taken in conjunction with an air test.	Plant Site	Adjust mix design.
		Thickness	A minimum of one core per 1,200 yd ² .	Grade	Remove and replace with specification material, or appropriate price reduction.
		Test Report	Submit form T-258		Adjust mix design or production controls as necessary.
		Mix design check test (compressive strength)	On first day's production and on one other day during first seven days of production - one set of cylinders or cores to verify mix design and production controls.		
Related Items: 03055	Portland Cement				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 17

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02715	Hydrated Lime Treated Roadbed	Lab Density AASHTO T-99 Method D	As necessary to establish laboratory density.		
		Field Density and moisture Content by Nuclear Gage AASHTO T-310	Lot < 7,800 yd ² . A minimum of one moisture and density test per subplot of 1,500 yd ² .	Grade	Contractor must rework and compact until moisture and density meet specifications.
		Temperature Requirements as per specifications.	As necessary to determine specification compliance.	Project Site	As directed by the Engineer.
		Test Report	Submit form T-348 weekly.		
Related Items: 02746 02745	Hydrated Lime Asphalt Material				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 18

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02721	Untreated Base Course	Wear * AASHTO T-96	Submit a 200 lb sample of aggregate per source, use form T-268.	Materials Source	Contractor must select another materials source.
		Unit Weight * AASHTO T-19	Submit a 200 lb sample of aggregate per source, use form T-268.	Materials Source	Contractor must select another materials source.
		Liquid Limit * AASHTO T-89 Plasticity Index * AASHTO T-90	Submit a 50 lb sample of aggregate per source, use form T-268.	Materials Source	Contractor must select another materials source.
		Liquid Limit AASHTO T-89 Plasticity Index AASHTO T-90	A minimum of one determination per five test lots. (A minimum of one determination per source.)	Grade	Remove and replace with specification material.
		Sieve Analysis AASHTO T-27 & T-11	A minimum of five determinations when the daily production exceeds 2,500 tons, a minimum of four determinations when it is between 1,500 and 2,500 tons, and a minimum of three determinations when less than 1,500 tons. (A minimum of one determination per 500 tons.)	Grade	Correct or remove and replace with specification material, or appropriate price reduction.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 19

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02721	Untreated Base Course (continued)	Lab Density AASHTO T-180 Method D	A minimum of one test per 11,000 tons.	Grade	Contractor must continue to compact until density meets specification.
		Field Density and Moisture Content by Nuclear Gage AASHTO T-310	A minimum of one determination per subplot of approximately 1,500 yd ² .		
		Test Report	Submit form T-138 or computer printout weekly.		

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 20

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02741	Hot Mix Asphalt Aggregate Source	Submit adequate sample of aggregate from each source (use form T-268) AASHTO T-19 Unit Weight** AASHTO T-104 Soundness of Aggregate by use of Sodium Sulfate** AASHTO T-96 L.A. Wear** AASHTO T-112 clay lumps and friable particles**	1 per source. 1 per source. 1 per source. 1 per source.	Stockpile or pit Stockpile or pit Stockpile or pit Stockpile or pit	Contractor must select another materials source Contractor must select another materials source Contractor must select another materials source Contractor must select another materials source

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 21

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02741	Hot Mix Asphalt (continued) Aggregate properties	Sample in accordance with AASHTO T-2 ASTM D-5821 Fract-face (One and two fract-face)* AASHTO T-89, T-90 - plastic limit and plasticity index * AASHTO T-304 Fine aggregate angularity * ASTM D-4791 Flat and elongated 1 to 3 ratio * AASHTO T-176 Sand equivalent *	1 test per week 1 test a week 1 test a week 1 test a week 1 test a week	Stockpile Stockpile Stockpile Stockpile Stockpile	Reject Stockpile Reject Stockpile Reject Stockpile Reject Stockpile Reject Stockpile

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 22

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02741	Hot Mix Asphalt (continued) Superpave volumetric mix design verification	AASHTO T-312 and PP-28 Gyrotory volumetric mix design*	8 specimens/design	Verified mix design prior to paving	New mix design
		AASHTO T-283 as modified by UDOT 8-957 Lottman test**	1 test 6 specimens/test	Verified mix design prior to paving	New mix design
		Pavement Analyzer (Ruting Test)**	1 test 3 specimens/test	Verified mix design prior to paving	New mix design
		AASHTO T-308 asphalt content of hot mix asphalt by the ignition method (For calibration of regional and field burn off ovens)*	(2 sets of 5 samples) 10 cold feed samples at the verified design and production asphalt binder	After verified mix design, prior to paving	
		AASHTO 209 - Rice	4 Samples		

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 23

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02741	Hot Mix Asphalt (continued)	AASHTO T-40 sampling of bituminous materials (Binder)	As per 02745	Hot plant	
		UDOT Materials Manual Part 8-961 and ASTM D-3665 sampling of hot mix asphalt and random sampling	4 tests per lot	Project site	
		AASHTO T-195 degree of particle coating	Initial, then once a week	Hot plant	Modify production to meet coating requirement
		AASHTO T-308 asphalt content of hot mix asphalt by the ignition method	4 tests per lot	Project site	Bonus/deduction/rejection
		AASHTO T-11, T-27, and T-30 mechanical analysis of extracted aggregate	4 tests per lot	Project site	Bonus/deduction/rejection
		ASTM D-2726 Density of cores	10 cores per lot with two cores per subplot	Project site	Bonus/deduction/rejection
		ASTM D-3549 thickness of compacted hot mix asphalt specimens	10 cores per lot with two cored from each subplot	Project site	Correction
		AASHTO T-209 maximum specific gravity of bituminous mixture (Rice)	2 Density tests for each lot. (One Rice is an average of two replicates)	Project site	

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 24

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02741	Hot Mix Asphalt (continued)	<p>AASHTO T-209 maximum specific gravity of bituminous mixture (Rice)</p> <p>AASHTO T-312, PP-28 Gyratory volumetric mix design (VMA)</p> <p>AASHTO T-283 as modified by UDOT 8-957 Lottman test (For information only)**</p> <p>Pavement analyzer (Fatigue test) (For information only)</p> <p>ASTM E 1274 Pavement roughness using a profilograph**</p>	<p>1 Density test for VMA for each lot. (One Rice is an average of two replicates)</p> <p>3 Tests/lot 2 specimens/test</p> <p>1 test per week 6 specimens/test</p> <p>2 tests/project 3 specimens/test</p> <p>2 runs per lane per production day within 2 days of placement (one per wheel path)</p>	<p>Project site</p> <p>Project site</p> <p>Project site</p> <p>Project site</p> <p>Project site</p>	<p>Bonus/deduction/rejection</p> <p>Correction and reprofile</p>

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 25

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02743	Hot Mix Asphalt - Bike and Pedestrian Paths				
	Aggregate Source	<p>AASHTO T-19 Unit Weight*</p> <p>AASHTO T-104 Soundness of Aggregate by use of Sodium Sulfate*</p> <p>AASHTO T-96 L.A. Wear*</p> <p>AASHTO T-112 clay lumps and friable particles*</p>	<p>Initial</p> <p>Initial</p> <p>Initial</p> <p>Initial</p>	<p>Stockpile or pit</p> <p>Stockpile or pit</p> <p>Stockpile or pit</p> <p>Stockpile or pit</p>	<p>Contractor must select another materials source</p> <p>Contractor must select another materials source</p> <p>Contractor must select another materials source</p> <p>Contractor must select another materials source</p>

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 26

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02743	Hot Mix Asphalt - Bike and Pedestrian Paths (continued)				
	Aggregate properties	Sample in accordance with AASHTO T-2			
		ASTM D-5821 Fract-face. (One and two fract-face)**	Initial	Stockpile	Reject Stockpile
		AASHTO T-89, T-90 - plastic limit and plasticity index **	Initial	Stockpile	Reject Stockpile
		AASHTO T-304 Fine aggregate angularity **	Initial	Stockpile	Reject Stockpile
		ASTM D-4791 Flat and elongated 1 to 3 ratio **	Initial	Stockpile	Reject Stockpile

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 27

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02743	Hot Mix Asphalt - Bike and Pedestrian Paths (continued)				
	Hot Mix Asphalt superpave volumetric mix verification	Certificate of compliance (Previously approved mix design)*	Initial Submit design data sheet	Prior to paving	Use pre-approved mix design
		Certified mix design	Once	Prior to paving	Deduction/reject as per 02742

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 28

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02744	Hot Mix Asphalt - Procurement Aggregate Source	Submit adequate sample of aggregate from each source (use form T-268) AASHTO T-19 Unit Weight* AASHTO T-104 Soundness of Aggregate by use of Sodium Sulfate* AASHTO T-96 L.A. Wear* AASHTO T-112 clay lumps and friable particles*	Initial Initial Initial Initial	Stockpile or pit Stockpile or pit Stockpile or pit Stockpile or pit	Contractor must select another materials source Contractor must select another materials source Contractor must select another materials source Contractor must select another materials source

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 29

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02744	Hot Mix Asphalt - Procurement (continued) Hot Mix Asphalt superpave volumetric mix verification	AASHTO T-311 and PP-28 Gyrotory volumetric mix design* AASHTO T-283 as modified by UDOT 8-957 Lottman test*	8 specimens/design 1 test 6 specimens/test	Verified mix design prior to paving Verified mix design prior to paving	New mix design New mix design

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 30

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02744	Hot Mix Asphalt - Procurement (continued)	<p>Manual of Instruction 8-961 and ASTM D-3665 sampling of Hot Mix Asphalt</p> <p>AASHTO T-308 asphalt content of HMA by ignition oven</p> <p>AASHTO T-11, T-27, T-30 Mechanical analysis of extracted aggregate</p>	<p>3 samples per 2,750 tons</p> <p>3 samples per 2,750 tons</p> <p>3 samples per 2,750 tons</p>	<p>Hot mix plant/ Project site</p> <p>Hot mix plant/ Project site</p> <p>Project site</p>	<p>Bonus/deduction/reject</p> <p>Bonus/deduction/reject</p>

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 31

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02745	<p>Asphalt Materials</p> <p>Cut-back Asphalt</p> <p>Asphalt Emulsions/Rejuvenating Agents, SS, CSS, MS, CMS, CQS, emulsified primes/Type B, C, D</p> <p>Chip-Seal Coat Asphalt Emulsions CRS-2A, 2B, CRS-2P, LMCRS-2, and HFRS-2P</p>	<p>Manufacturer's Certificate of Compliance. Check Sample AASHTO M-81, M-82, and ASTM D2026</p> <p>Asphalt Emulsion Quality Management System. (QMP 508) select from UDOT's list of pre-qualified sources. Verify by contacting "Asphalt Specialist Engineer"</p> <p>Check sample - Only if product is questionable</p> <p>Upon completion of the project, inform "Asphalt Specialist Engineer" of quantities used for recording.</p> <p>AASHTO M-140, M-208</p>	<p>Two 1 qt samples (metal can) for each truck/or trailer load of cut-back. Submit one sample per 155 tons to the central Materials Asphalt Lab for testing. Retain back-up samples until specification verification is completed. Use forms T-247 and T-281</p> <p>AEQMS samples obtained and performed by the Central Laboratory</p> <p>Submit a 1 qt sample (plastic bottle) only when product is questionable.</p> <p>Submit 1 qt sample (plastic bottle) per truck and/or trailerload. Test at Project Site</p>	<p>Project or Plant Site</p> <p>Prequalified Source</p> <p>Project Source</p> <p>Project site</p>	<p>Appropriate price reduction UDOT 8-955</p> <p>Not to be shipped to project</p> <p>As directed</p> <p>Rejection</p>

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 32

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02745	Asphalt Materials (continued) PG Asphalt Binders	Check Sample AASHTO MP-1 and UDOT 8-209	One random sample (comprised of three individual 1 qt, metal cans) per production day at a random time from the mix plant's asphalt tank injection line. Two cans are retained by UDOT and the other by the Contractor. The Contractor and UDOT will witness and certify the sample being taken. The certificate will accompany the sample. This sample represents one binder subplot. Each week's production is a binder lot with a maximum of eight sublots. If two sublots or less are accumulated within a production week, include these in the next week's production. Thus, a binder lot shall consist of at least three (3) sublots. Submit one random subplot sample out of each binder lot to the Central Laboratory (Asphalt Laboratory) for testing or inspection. Retain back up sample along with all other samples until specification verification is completed. (See Quality Management Plan 509.4.1. Use forms T-247 and T-281.)	Hot-mix plant site.	Appropriate price reduction UDOT 8-209.5.
	Hot-Pour Bituminous Concrete Crack Sealant	Manufacture's Certificate of Compliance. Select from Materials Division list of pre-qualified sources.	Each shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 33

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02746	Hydrated Lime	Suppliers must be pre-qualified by The Materials Division through the Quality Management Plan: Hydrated Lime. Select from Materials Division list of pre-qualified sources.		Prequalified Source	Rejection of product and possible removal from prequalified source list.
Related Items: 02746	Hydrated Lime for Asphalt Mixture	Test Report	One per project issued by central lab based on tests performed prior to shipment	Central Lab	

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 34

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02749 Related Items 02721	Asphalt Driveway Untreated Base Course				
02752	Portland Cement Concrete Pavement	Wear * AASHTO T-96 Soundness * AASHTO T-104 Clay Lumps * AASHTO T-112 Water Quality AASHTO T-26	Submit a 200 lb sample of aggregate per source, use form T-268. Submit a 200 lb sample of aggregate per source, use form T-268. Submit a 200 lb sample of aggregate per source, use form T-268. Submit a 1 qt sample for each non-potable water source.	Materials Source Materials Source Stockpile Source	Contractor must select another source. Contractor must select another materials source. Rework or replace stockpile. Use an acceptable water source.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 37

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02752	Portland Cement Concrete Pavement (continued)	Mix Design (Trial Batches) Contractor's trial batches to be made in accordance with standard specifications. Trial batch results shall be submitted and approved before concrete pavement is placed. Sufficient batches shall be made to cover any possible changes in mix components that might occur. Sieve Analysis AASHTO T-27 and T-11	Submit a 1 pint sample of admixtures used in trial batches to Central Lab for fingerprinting. When production starts, send a sample of admixtures to Central Lab to insure they are the same as used in trial batches. One gradation per stockpile containing the approximate tonnage required for a single day of concrete paving.	Supplier's location Stockpile	Contractor may have to change his proportions of coarse and fine aggregate, wash or crush the coarse aggregate finer or add more cement. Rework or replace stockpile.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 38

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02752	Portland Cement Concrete Pavement (continued)	Slump Test AASHTO T-119 and T-141 Air Test AASHTO T-152 and T-141	Test the first three truck loads at start up and the first three truck loads after each shutdown of more than one hour. Take additional tests at random through-out the shift (one test for every 800 yd ³ of concrete). Test the first three truck loads after each failed test.	Plant Site (Platform)	Another test is taken immediately. If the second test fails, the load is rejected. If the second test is in specification, a third test is taken. The load is then accepted or rejected based on the result of the third test.
		Yield AASHTO T-121 and T-141	One test per day taken in conjunction with an air test.	Plant Site	Adjust mix design.
		Strength Test AASHTO T-23	One set of test cylinders per 2,600 yd ³ of concrete pavement centrally mixed and hauled with non-agitating haul units, or one set of test cylinders for every 700 yd ³ of concrete pavement centrally mixed and hauled with agitating haul units or transit mixed.	Plant site for non-agitated haul units, roadbed for agitating haul units.	Remove and replace with specification material, or appropriate price reduction.
		Temperature Requirement (Mix Temperature)	One determination with each slump test.	Platform	Take corrective action or discontinue operations.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 39

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02752	Portland Cement Concrete Pavement (continued)	Test Beams AASHTO T-23 and T-97	A minimum of two test beams for each day of concrete paving.	Plant site for centrally mixed concrete or transit mixed concrete.	Not an acceptance test. It is used to determine when traffic can be allowed on the pavement.
		Thickness	A minimum of one core per 1,300 yd ² .	Pavement	Take two additional cores for deficient cores (one on each side midpoint between the deficient core and the adjacent core). Appropriate price reduction or removal and replacement with specification material.
		Smoothness	A minimum of two pavement profiles for each day of concrete paving. For quantities less than 4,000 yd ² add to subsequent days production.	Pavement Surface	Grinding of pavement bumps, loss of bonus pay, or both.
		Test Report	Submit forms T-251 and T-258.		
Related Items: 03211 03390 03152 03055 03055	Reinforcing Steel Concrete Curing Compound Concrete Joint Control Portland Cement Fly Ash				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 40

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02762	Plowable Pavement Marker Marker and Epoxy	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
02765	Pavement Marking Paint Acrylic water based and VOC compliant solvent based paint	Test Report	Submit 1 pint sample of each color to Central Materials Chemistry Lab prior to application. A test report will be issued for all pretested material.	Central Materials Lab	Rejection
	Glass Sphere (Beads)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 41

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02768	Pavement Marking Materials Pavement marking tape, Epoxy pavement markings, Methylmethacrylate, Preformed thermoplastic legends	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Glass Sphere (Beads)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
02771 Related Items: 03055 03152 03211 05120 03390	Curb, Gutter, Driveway and Disabled Pedestrian Ramp Concrete Concrete Joint Control Reinforcing Steel Structural Steel Concrete Curing Compound				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 42

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02773 Related Items: 02748 02746 02745	Asphalt Concrete Curb Mineral Aggregate Tack Coat Lime Asphalt Material	Gradation AASHTO T-27	One test per stockpile.	Stockpile	Rework or Replace
02776 Related Items: 03055 03152 03390	Concrete Sidewalk, Median Filler, and Flatwork Concrete Concrete Joint Control Concrete Curing Compound				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 43

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02785	Chip Seal Coat	Wear * AASHTO T-96 Soundness * AASHTO T-104 Unit Weight * AASHTO T-19 Stripping * UDOT 8-945 Friction Value * AASHTO T-278 and T-279 Rounded Particles * UDOT 8-929	Submit a 50 lb sample of aggregate per source, use form T-268. Submit a 50 lb sample of aggregate per source, use form T-268. Submit a 50 lb sample of aggregate per source, use form T-268. Submit a 50 lb sample of aggregate per source, use form T-268. Submit a 50 lb sample of aggregate per source, use form T-268. Submit a 50 lb sample of aggregate per source, use form T-268.	Material Source Material Source Stockpile Stockpile Materials Source Stockpile	Contractor must select another materials source. Contractor must select another materials source. Contractor must select another materials source. Contractor must select another materials source. Contractor must select another materials source. Contractor must modify his crushing procedure or select a suitable source.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 44

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02785	Chip Seal Coat (continued)	Sieve Analysis AASHTO T-27 and T-11	A minimum of five determinations when the stockpile exceeds 2,500 tons, a minimum of four determinations when it is between 1,500 and 2,500 tons and a minimum of three determinations when it is less than 1,500 tons. (A minimum of one determination per 1,100 tons.)	Stockpile	Correct, or remove and replace with specification material.
		Temperature Requirements As per Specifications	As necessary to determine specification compliance.	Project Site	As directed by the Engineer.
		Test Report	Submit form T-138 weekly.		
Related Items: 02745	Asphalt Material				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 45

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02786	Open Graded Surface Course Aggregate Source	Submit adequate sample of aggregate from each source (use form T-268)			
		AASHTO T-19 Unit Weight *	1 per source	Stockpile or pit	Contractor must select another materials source
		AASHTO T-104 Soundness of Aggregate by use of Sodium Sulfate*	1 per source	Stockpile or pit	Contractor must select another materials source
		AASHTO T-96 L.A. Wear*	1 per source	Stockpile or pit	Contractor must select another materials source
		AASHTO T-112 clay lumps and friable particles*	1 per source	Stockpile or pit	Contractor must select another materials source
		AASHTO T-278 and T-279 polish test*	1 per project as required by the test method	Stockpile or pit	Contractor must select another materials source

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 46

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02786	Open Graded Surface Course (Continued)				
	Aggregate properties	Sample in accordance with AASHTO T-2			
		ASTM D-5821 Fract-face. (One and two fract-face)**	1 test per week	Stockpile	Reject Stockpile
		AASHTO T-89 , T-90, liquid limit and plasticity index **	Initial	Stockpile	Reject Stockpile
		AASHTO T-304 Fine aggregate angularity**	Initial	Stockpile	Reject Stockpile
		ASTM D-4791 Flat and elongated 1 to 3 ratio **	Initial	Stockpile	Reject Stockpile
		AASHTO T-176 Sand equivalent **	Initial	Stockpile	Reject Stockpile

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 47

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02786	Open Graded Surface Course (Continued)				
	Job mix design	AC - Aggregate mix design UDOT 8-954	Once per project. (10 working days before beginning to pave). Also when AC source and aggregate gradation and source change.	Verified mix design prior to paving	New job mix design
		AASHTO T-11, T-27, T-30 Aggregate gradation	Once per project (10 working days before beginning to pave). Also when aggregate source and/or gradation change	Verified mix design prior to paving	New job mix design

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 48

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02786	Open Graded Surface Course (Continued)	<p>AASHTO T-168 and ASTM D-3665 sampling and hot mix asphalt random sampling</p> <p>AASHTO T-145 degree of particle coating</p> <p>ASTM D-6307 Asphalt content of hot mix asphalt by ignition method (For aggregate gradation)</p> <p>AASHTO T-30 Mechanical analysis of extracted aggregate</p>	<p>4 per lot</p> <p>Initial</p> <p>4 per lot</p> <p>4 per lot</p>	<p>Hot plant</p> <p>Hot plant</p> <p>Hot plant</p> <p>Hot plant</p>	<p>Modify production to meet coating requirements</p> <p>Bonus/Deduction/Rejection</p>

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 49

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02786	Open Graded Surface Course (Continued)	<p>ASTM E 1274 Pavement roughness using profilograph</p>	<p>Two per lane each on wheel path within 2 days of placement</p>	<p>Project site</p>	<p>Bonus/correction/reporfile</p>

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 50

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02812	Pressurized Irrigation Systems				
	Polyvinyl Chloride (PVC) Pipe (Irrigation System)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Stop and Waste Valve (Irrigation System)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Backflow Preventer (Irrigation System)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Automatic Control Valve (Irrigation System)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Automatic Controller (Irrigation System)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
Related Items: 03055 02812 16135	Class B Concrete PVC Conduit Junction Box and Extension				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 51

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02812	Pressurized Irrigation Systems (continued)				
	Drip Valve Control Assembly (Irrigation System)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Pop-up Sprinkler (Irrigation System)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Rotary Sprinkler (Irrigation System)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Micro Sprinkler (Irrigation System)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Drip Emitter (Irrigation System)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 52

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
<p>02821</p> <p>Related Items: 03055</p>	<p>Chain Link Fencing and Gates</p> <p>Concrete</p>	<p>Manufacturer's Certificate of Compliance</p>	<p>Each Shipment</p>	<p>Project Site</p>	<p>Rejection</p>
<p>02822</p> <p>Related Items: 03055</p>	<p>Right-of-Way Fence and Gate</p> <p>Wire Mesh, Barbed Wire, Wood Post, Metal Post, and Gates</p> <p>Concrete</p>	<p>Manufacturer's Certificate of Compliance</p>	<p>Each Shipment</p>	<p>Project Site</p>	<p>Rejection</p>

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 53

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02825	Cattle Guard	Fabricators must be pre-qualified by Materials Division through the Quality Management Plan: Precast/Prestressed Concrete Structures. Select from Materials Division list of pre-qualified sources.			
		Test Report	Issued by Central Lab based on tests performed prior to shipment. A test report will accompany the shipment. All pretested material will be tagged with an orange UDOT sticker.	Fabrications Plant	Rejection
	Concrete	Per Section 03055 except as follows. Mix Design(Trail Batches) must be submitted and approved by the Materials Division each new calender year.			
		Visual Inspection	Each Shipment	Project Site	Rejection
Related Items: 03310 03211 05120 07221	Structural Concrete Reinforcing Steel Structural Steel Aggregate (UTBC)				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 54

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02841	Traffic Barriers	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Beam Guardrail	Visual Inspection	Each Shipment	Project Site	Rejection
	Precast Concrete Barrier	Fabricators must be pre-qualified by the Materials Division through the Quality Management Plan: Precast/Prestressed Concrete Structures. Select from Materials Division list of pre-qualified sources.		Prequalified Source	Rejection of product and possible removal from pre-qualified source list.
		Test Report	Issued by Central Lab based on tests performed prior to shipment. A test report will accompany the shipment. All pretested material will be tagged with an orange UDOT sticker.	Fabricators Plant	Rejection
	Concrete	Per Section 03055 except as follows: Mix Design(Trial Batches) must be submitted and approved by the Materials Division each new calendar year.			
	Barrier Seal	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
Related Items: 03211 03211		Visual Inspection	Each Shipment	Project Site	Rejection
	Reinforcing Steel Welded Steel Wire Reinforcement				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 55

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02841	Traffic Barriers (continued)				
	Beam Guardrail and Double Beam Guardrail	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
		Visual Inspection	Each Shipment	Project Site	Rejection
	Posts and Blocks Concrete				
	Traffic Control Cable				
	Polyethylene Tube, Cable, Clip, and Reflectors	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
Related Items: 06055 03055					
	Posts				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 56

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02841 Related Items: 02842	Traffic Barriers (continued) Barrier Reflector Sheeting	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
02842 Related Items: 02765	Delineators Steel or Flexible Posts Sheeting Pavement Marking Paint	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 57

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02861	Precast Noise/ Retaining Walls	Fabricators must be pre-qualified by the Materials Division through the Quality Management Plan: Precast/ Prestressed Concrete Structures. Select from Materials Division list of pre-qualified sources. Test Report	Issued by Central Lab based on tests performed prior to shipment. A test report will accompany the shipment. All pretested material will be tagged with an orange UDOT sticker.	Prequalified Source Fabricators Plant	Rejection of product and possible removal from pre-qualified source list. Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 58

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02861	Precast Noise/ Retaining Walls (continued) Concrete	Per Section 03055 except as follows. Mix Design(Trail Batches) must be submitted and approved, by the Materials Division, each new calendar year. Visual Inspection	Each Shipment	Project Site	Rejection
Related Items: 03211 03211 05120 03152 02075	Reinforcing Steel (Epoxy Coated) Welded Wire Fabric (Epoxy Coated) Elastomeric Bearing Pad Backer Rod Geotextiles				

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 59

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02891	Traffic Signs Substrate and Fasteners	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
Related Items: 03055 03211 05120 06055 05120	Concrete Reinforcing Steel Anchor Bolts Posts Structural Steel				
02892	Traffic Signal	Manufacturer's Certificate of Compliance for each item.	Each Shipment	Project Site	Rejection
Related Items: 03055 03211 03575	Class A(AE) Concrete Reinforcing Steel (Epoxy Coated) Flowable Fill	Visual Inspection, all electrical equipment must be IMSA or Underwriters Laboratories (UL) certified.	Each Shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 60

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02896 Related Items: 03055	Boundary Survey Right-of-Way Marker Concrete	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 61

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02911 Related Items: 02922	Mulch Cellulose Fiber Mulches Straw Mulch Tackifier Seed, Turf Seed and Turf Sod	Manufacturer's Certificate of Compliance Utah Department of Agriculture Field Certification Manufacturer's Certificate of Compliance	One per lot Per Field One per lot	Project Site Project Site Project Site	Rejection Rejection Rejection
02912 Related Items: 02922 02932	Topsoil Seed Plants	Test Report (Contractor furnished topsoil)	Issued by approved independent soil testing laboratory. One test report per topsoil source.	Source Location	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 62

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
02967	Surface Repaving	Scarified Depth Check	500 ft control section 125 ft subplot One test per subplot	Scarified mat	Make operational adjustments to obtain specification results.
Related Items 02786	Open Graded Surface Coarse	Temperature Requirements (Recycled mix)	As necessary to assure specification compliance.	Scarified mat	Make operational adjustments to obtain specification results.
		(Minimum Compaction Temperature)	As necessary to assure specification compliance.	Mat	Adjust compaction efforts to coincide with paving operations.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 65

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
03055	Portland Cement Concrete	Wear * AASHTO T-96	Submit a 200 lbs sample of aggregate per source, use form T-268.	Materials Source	Contractor must select another source.
		Soundness * AASHTO T-104	Submit a 200 lbs sample of aggregate per source, use form T-268.	Materials Source	Contractor must select another source.
		Clay Lumps * AASHTO T-112	Submit a 200 lbs sample of aggregate per source, use form T-268.	Stockpile	Rework or replace stockpile.
		Water Quality AASHTO T-26	Submit a 1 qt sample for each non-potable source.	Source	Use an acceptable water source.
		Mix Design (Trial Batches) Contractor's trial batches to be made in accordance with standard specifications. Trial batch results shall be submitted and approved before any concrete is placed. Sufficient batches shall be made to cover any possible changes in mix components that might occur.	Submit a 1 pint sample of admixtures used in trial batches to Central Lab for fingerprinting. When production starts, send samples of admixtures to Central Lab to insure they are the same as used in trial batches.	Supplier's Location	Contractor may have to change proportions of coarse and fine aggregate, wash or crush the coarse aggregate finer, or add more cement.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 66

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
03055	Portland Cement Concrete (continued)	Sieve Analysis - Coarse and Fine Aggregate AASHTO T-11 and T-27	Perform one test per stockpile per week in advance of placement. In addition, one test per stockpile prior to placements greater than 100 yd ³ .	Stockpile	Rework or replace stockpile.
		Slump Test AASHTO T-119	At the start up and after each failed batch, test every batch until two consecutive batches pass. Then take one test per 50 yd ³ .	Project Site	Another slump test is taken immediately. If the second slump test fails, the batch is rejected. If the second slump test meets specification, take a third slump test. The batch is then accepted or rejected based on the results of the third test.
		Air Test AASHTO T-152	At the start up and after each failed batch, test every batch until two consecutive batches pass. Then take one test per 50 yd ³ .	Project Site	Another air test is taken immediately. If the second air test fails, the batch is rejected. If the second air test meets specification, take a third air test. The batch is then accepted or rejected based on the results of the third test.
		Strength Test AASHTO T-22 and T-23	A minimum of one compressive strength test consisting of one set of three cylinders, will be taken for each 50 yd ³ , or fraction thereof. If placement is less than 8 yd ³ , proceed as directed.	Project Site	Appropriate price reduction or removal and replacement with specification material.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 67

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
03055	Portland Cement Concrete (continued)	Yield AASHTO T-121	One test per mix design for class AA(AE) and class A(AE).	Project Site	Adjust mix design
		Temperature Requirement (Mix Temperature)	One determination with each slump test.	Project Site	Take corrective action or discontinue operations.
	Portland Cement	Suppliers must be pre-qualified by The Materials Division through the Quality Management Plan: Cement. Select from Materials Division list of pre-qualified sources.		Prequalified Source	
		Verification Sample	One random sample per month obtained by Central Lab.	Supplier's Plant	Rejection of product and possible removal from prequalified source list.
	Fly Ash	Suppliers must be pre-qualified by The Materials Division through the Quality Management Plan: Fly Ash. Select from Materials Division list of pre-qualified sources.		Prequalified Source	
Related Items: 03211	Reinforcing Steel and Welded Wire	Verification Sample	One random sample every two months obtained by Central Lab.	Supplier's Plant	Rejection of product and possible removal from prequalified source list.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 68

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
03152	Concrete Joint Control				
	Preformed Elastomeric Joint Sealants	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Hot-Poured Joint Sealant	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Premolded Joint Fillers	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Silicone Joint Sealer	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Backer Rod	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Joint Sealer (Structures)	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Waterstops	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 69

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
03211	Reinforcing Steel and Welded Wire	Fabricators must be pre-qualified by Materials Division through the Quality Management Plan: Reinforcing Steel. Select from Materials Division list of pre-qualified sources.		Prequalified Source	Rejection of product and possible removal from pre-qualified source list.
		Manufacturer's Certificate of compliance	Per Shipment	Project Site	Rejection
	Epoxy Coating	Fabricators must be pre-qualified by Materials Division through the Quality Management Plan: Reinforcing Steel Epoxy Coating. Select from Materials Division list of pre-qualified sources.		Prequalified Source	Rejection of product and possible removal from pre-qualified source list.
		Manufacturer's Certificate of compliance	Per Shipment	Project Site	Rejection
	Galvanized Coating	Fabricators must be pre-qualified by Materials Division through the Quality Management Plan: Reinforcing Steel Galvanized Coating. Select from Materials Division list of pre-qualified sources.		Prequalified Source	Rejection of product and possible removal from pre-qualified source list.
		Manufacturer's Certificate of compliance	Per Shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 70

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
05832	Expansion Joint	Select a joint system from the Department's approved list of joint systems.			
Related Items: 05120		Manufacturer's Certificate of Compliance.	Per Shipment	Project Site	Rejection
	Structural Steel	Visual Inspection	Each Shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 75

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
06055	Timber and Timber Treatment				
	Structural Timber, Lumber, Sign Post, Guardrail Post, and Mailbox Post	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
09970	Painting for Structural Steel	Select a complete coating system from the Accepted Products Listing available through the Research Division.			
	Coating System	Test Report	Issued by Central Lab based on tests performed prior to shipment. A test report will accompany the shipment. All pretested material will be tagged with an orange UDOT sticker.	Central Lab	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 76

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
16135 Related Items: 02061 02842	Electrical Junction Boxes Select Aggregate Delineator	Manufacturer's Certificate of Compliance for each item.	Each Shipment	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 77

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
16525 Related Items: 16135 03055 03211 03575 16560 02842 05210	Highway Lighting Electrical Junction Boxes Portland Cement Concrete Reinforcing Steel and Welded Wire Flowable Fill Highway Traffic Signal Delineators Structural Steel	Manufacturer's Certificate of Compliance for each item. Visual Inspection, all electrical equipment must be IMSA or Underwriter Laboratories(UL) certified.	Each Shipment Each Shipment	Project Site Project Site	Rejection Rejection
16526	Electric Work (Bridges)	Manufacturer's Certificate of Compliance	Each Item	Project Site	Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 78

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
	Galvanized Steel Pipe, Polyvinyl Pipe, and Copper Pipe	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Cast Iron Pipe Fittings and Welded Steel Pipe	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Fittings, Valves, Gaskets, Bicycle Grates, Manholes, etc.	Manufacturer's Certificate of Compliance	Each Shipment	Project Site	Rejection
	Electrical Components All other electrical components.	Manufacturer's Certificate of Compliance for each item. Visual Inspection, all electrical equipment must be IMSA or Underwriters Laboratories (UL) certified.	Each Shipment Each Shipment	Project Site Project Site	Rejection Rejection

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 79

Section	Material Type or Type of Construction	Testing Method/ Acceptance Documentation	Testing Frequency	Point of Acceptance	Required Action for out of Specification Material
	Plumbing Components All other plumbing components.	Manufacturer's Certificate of Compliance for each item.	Each Shipment	Project Site	Rejection

Items that are not listed, but are to be incorporated in the work, still require appropriate testing or certificates of compliance as outlined in the Standard Specifications, Project Special Provisions and Supplemental Specifications and change orders.

*Performed or approved by Region Lab ** Performed by Contractor and reviewed by Engineer May 2003

Page 80